

WHAT IS CLAIMED IS:

1. A cutter insert for milling tools, the insert comprising a base body having a base surface, a top surface, and four side surfaces which, together with each of the base surface and the top surface, define respective cutting edges; the base body being twisted about two separate axes of the base body.
- 5 2. The cutter insert as defined in claim 1, characterized in that the base body has a securing bore formed therethrough from the base surface to the top surface.
3. The cutter insert as defined in claim 2, characterized in that the two axes lie in a common plane which is intersected by the securing bore at a right angle.
10
4. The cutter insert as defined in claim 3, characterized in that the common plane is a central plane of the base body situated midway between the top surface and the base surface.
5. The cutter insert as defined in claim 4, characterized in that the two axes intersect one another at a right angle.
15
6. The cutter insert as defined in claim 1 characterized in that the two axes intersect one another at a right angle.
7. The cutter insert as defined in claim 1, characterized in that the cutting edges are symmetrically arranged with respect to the two axes which thereby define respective symmetry axes.
20
8. The cutter insert as defined in claim 1, characterized in that the cutter insert is doubly linearly symmetrical.

9. The cutter insert as defined in claim 1, characterized in that each side surface is bordered by a pair of cutting edges, one of which adjoins the top surface and the other of which adjoins the base surface, each pair of cutting edges being interconnected by an imaginary reference line which
5 perpendicularly intersects a central plane of the base body situated midway between the top surface and the base surface.

10. The cutter insert as defined in claim 1, characterized in that the side surfaces are convex.

10 11. The cutter insert according to claim 1 wherein a center axis of the base body extends through the top surface and the base surface, the base body having a total height H parallel to the center axis, each side surface including two opposite corner edges, each corner edge extending from the top surface to the base surface, the two corner edges of each side surface being offset from one another by a first distance A in a direction parallel to the center axis,
15 wherein $H-2B=A$ and $A<B$.

12. The cutter insert as defined in claim 1, characterized in that the side surfaces are oriented perpendicularly to a central plane of the base body disposed midway between the top surface and the base surface.

20 13. The cutter insert as defined in claim 1, characterized in that the side surfaces are planar.

14. The cutter insert as defined in claim 2, characterized in that the securing bore has respective seating surfaces at the top surface and the base surface for receiving a head of a threaded fastener.

25 15. The cutter insert as defined in claim 14, characterized in that the seating surfaces are conical.

16. The cutter insert as defined in claim 1, characterized in that the top surface and the base surface are each rectangular as viewed in a direction toward the top surface.

17. The cutter insert as defined in claim 1, characterized in that at
5 least two of the side surfaces are rhomboid.

18. A milling tool comprising a tool body and a plurality of cutter inserts, the tool body defining an axis of rotation and having a plurality of insert seats spaced around the axis of rotation for receiving respective cutter inserts, each cutter insert comprising a base body having a base surface, a top
10 surface, and four side surfaces which, together with each of the base surface and the top surface, define respective cutting edges; the base body being twisted about two separate axes of the base body.

19. The milling tool as defined in claim 18, characterized in that each insert seat has seating surfaces at which the respective cutter insert is set
15 negatively in a radial direction with respect to an imaginary line which extends parallel to a central plane of the base body situated midway between the top surface and the base surface, the imaginary line touching a peripheral cutting edge at its trailing corner.

20. The milling tool as defined in claim 18, characterized in that each insert seat has seating surfaces at which the respective cutter insert is set
20 negatively in an axial direction with respect to an imaginary line which is parallel to a central plane of the base body situated midway between the top surface and the base surface.